



US006158201A

**United States Patent** [19]

Pruitt et al.

[11] **Patent Number:** **6,158,201**[45] **Date of Patent:** **Dec. 12, 2000**[54] **ROTARY MOWER CONDITIONER HAVING  
IMPROVED CUT CROP FLOW**[75] **Inventors:** **Martin E. Pruitt, Hesston; Kurt  
Graber, Moundridge; Cecil L. Case,  
Newton; Michael L. O'Halloran,  
Hesston, all of Kans.**[73] **Assignee:** **Hay & Forage Industries, Hesston,  
Kans.**[21] **Appl. No.:** **09/153,290**[22] **Filed:** **Sep. 15, 1998**[51] **Int. Cl.<sup>7</sup>** ..... **A01D 75/30; A01D 34/44;  
A01D 34/66; A01D 43/00; A01D 61/00**[52] **U.S. Cl.** ..... **56/6; 56/13.9; 56/157;  
56/16.4 R**[58] **Field of Search** ..... **56/157, 95, 6,  
56/13.5, 13.9, 16.4 R, 255, 295, 192, DIG. 1**[56] **References Cited****U.S. PATENT DOCUMENTS**

3,673,779	7/1972	Scarnato et al.	56/DIG. 1
4,185,445	1/1980	Van Der Lely	56/6
4,531,349	7/1985	Ehrhart et al.	
4,637,201	1/1987	Pruitt et al.	
4,843,804	7/1989	Wellman	56/16.4
5,012,635	5/1991	Walters et al.	56/6
5,272,859	12/1993	Pruitt et al.	
5,345,752	9/1994	Pruitt et al.	
5,421,145	6/1995	Pruitt et al.	

5,430,997	7/1995	O'Halloran et al.	
5,433,064	7/1995	Schmitt et al.	56/6
5,463,852	11/1995	O'Halloran et al.	
5,519,989	5/1996	Shelbourne et al.	56/13.5
5,768,865	6/1998	Rosenbalm et al.	56/6
5,842,230	12/1998	Richardson et al.	56/6

**Primary Examiner**—Thomas B. Will**Assistant Examiner**—Meredith C Petrovick**Attorney, Agent, or Firm**—Hovey, Williams, Timmons &  
Collins

[57]

**ABSTRACT**

A mower conditioner includes a rotary style cutter bed and a pair of laterally extending crop conditioning rolls spaced rearwardly from the cutter bed. Crop flow is improved in the machine by a laterally extending conveying roller located between the cutter bed and the nip defined by the conditioning rolls. In particular, the conveying roller serves to lift cut crop up from the cutter bed and convey the crop rearwardly to the nip. This ensures that the cut crop moves in a steady stream from the cutter bed to the conditioning rolls, and thereby reduces the risk of cut crop being thrown forwardly by the cutters. A downwardly open area is preferably defined between the conveying roller and the cutter bed to provide a space through which dirt and debris can drop out of the machine. The conveying roller preferably has a rotational axis that is lower than the rotational axis of the lower conditioning roll and generally vertically aligned with the substantially planar cutting zone defined by the cutter bed.

**32 Claims, 6 Drawing Sheets**